Small Business Innovation Research/Small Business Tech Transfer

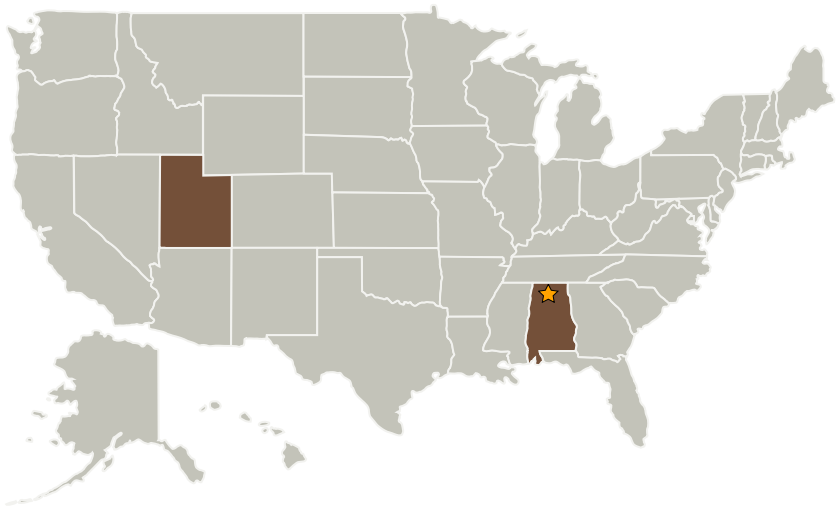
The Cyogenic Evaluation of Irradiated Composite Materials for Use in Composite Pressure Vessels, Phase II

Completed Technology Project (2006 - 2008)

Project Introduction

HyPerComp Engineering, Inc. (HEI) proposes to continue the characterization of the cryogenic evaluation of irradiated composite materials for use in composite overwrap pressure vessels COPVs. The intent of the proposed effort is to study the constituent raw composite material properties that result from radiation exposure and tested at cryogenic temperatures. HEI and Mississippi State University (MSU) have recently completed a Phase I STTR (contract #NNM05AA61C) through NASA/MSFC. The intent of this effort is to further the development of that key building block technology for lightweight composite structures suitable for cryogenic fuel storage or human in-space habitats. This effort will incorporate and expand previous work by the participants in the cryogenic performance of composite materials exposed to radiation environments.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Marshall Space Flight Center(MSFC)	Lead Organization	NASA Center	Huntsville, Alabama
HyPerComp Engineering, Inc.	Supporting Organization	Industry	Brigham City, Utah

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Marshall Space Flight Center (MSFC)

Responsible Program:

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Alabama	Utah

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX12 Materials, Structures, Mechanical Systems, and Manufacturing
  - TX12.1 Materials
    - TX12.1.1 Lightweight Structural Materials